UNITED STATES PATENT AND TRADEMARK OFFICE

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10/667,865	09/22/2003	Hirokazu Nishimura	17044	1153

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SCULLY SCOTT MURPHY & PRESSER, PC
400 GARDEN CITY PLAZA
SUITE 300
GARDEN CITY, NY 11530

EXAMINER
SYED, ATIA K

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 January 2009_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-22_ is/are pending in the application.

    4a) Of the above claim(s) _15-22_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-14_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 September 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _See Continuation Sheet_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11/01/2007, 04/18/2008, 07/29/2008, 04/02/2007, 08/31/2006, 09/12/2005, 09/22/2003.

DETAILED ACTION

Response to Restriction Requirement

Applicant's election without traverse of specie A regarding the diagnostic support system

is acknowledged.

Claims 15-22 are withdrawn from further consideration by the examiner, 37 CFR

1.142(b) as being drawn to a non-elected invention.

Election was made without traverse, filed on 01/09/2009.

Specification

The lengthy specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting any

errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected as failing to define the invention in the manner required by

35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or

operational language. The structure which goes to make up the device must be clearly and

positively specified. The structure must be organized and correlated in such a manner as to

present a complete operative device. The claim(s) must be in one sentence form only. Note the

format of the claims in the patent(s) cited.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by

Graham et al. (WO 98/58338), herein after referred to as Graham.

Regarding claim 1, Graham disclose a diagnostic support apparatus comprising:

diagnostic support content storage means (fig 2, page 12, lines 27-28; server with

database) for storing a plurality of diagnostic support contents for providing diagnostic support;

selection means (fig 3a, select practice routine 560; page 15, lines 6-7; physician

can select from a drop down menu) for selecting a desired diagnostic support content from the

plurality of diagnostic support contents stored in the diagnostic support content storage means;

information acquisition means (fig 11A, angiography routine; page 26, line 15-

page 28, line 19) for acquiring diagnostic information concerning at lest one of a patient, an

examination, and an image from a medical system;

diagnostic support information creating means (evaluation software 340; page 13,

lines 25-29; fig 3b, evaluation routine 600, generates diagnostic support information based on the

information selected by the physician in the earlier routines) for creating diagnostic support

information on the basis of the diagnostic support content selected by the selection means and

the diagnostic information acquired from the medical system; and

diagnostic support display means (display 312, page 13, line 4) for displaying the

diagnostic support information created by the diagnostic support information creation means.

Applicant is advised that the claim contains several examples of functional language

which describes the intended use or purpose of the device, rather than further limiting the

structure of the invention. Under MPEP 2114, such language will not overcome the prior art

where no structural differences are recited.

Examples of such language in the claim include "for storing a plurality of diagnostic

support contents ....", "for selecting a desired diagnostic support content ....", "for

acquiring diagnostic information concerning a patient........." etc.

Regarding claim 2, Graham disclose a diagnostic support apparatus wherein:

the diagnostic support apparatus is constituted by a plurality of computers

connected to each other through a line, and further comprises (fig 2; page 12, lines 27-29);

transmission means for transmitting the stored diagnostic support content, and

reception means for receiving the diagnostic support content transmitted from the

transmission means (fig 2; page 12, line 24-page 13, line 12); and

the diagnostic support information creating means creates diagnostic support

information on the basis of diagnostic information acquired from the medical system and

the diagnostic support content received by the reception means (page 17, lines 5-9; the diagnostic

support system acquires information provided by the physician including test results and

provides recommendations based on the received information and the data stored in the database

230).

Regarding claim 3, Graham disclose a diagnostic support apparatus further comprising:

diagnostic support content creating means for creating diagnostic support content

(evaluation software 340; page 13, lines 25-29);

transmission means for transmitting a diagnostic support content created by using

the diagnostic support content creating means; and

reception means for receiving the diagnostic support content transmitted from the

transmission means (fig 2; page 12, line 24-page 13, line 12).

Regarding claim 4, Graham disclose a diagnostic support apparatus further comprising:

diagnostic support content creating means storage means for storing the diagnostic

support content creating means (server, or the memory of local computer hard drive or floppy

disk drive; page 12, lines 24-32-page 13, lines 1-17);

transmission means for transmitting diagnostic support content creating means

stored in the diagnostic support content creating means storage means; and

reception means for receiving the diagnostic support content creating means

transmitted from the transmission means, and creates diagnostic support content by using the

received diagnostic support content creating means (fig 2; page 12, line 24-page 13, line 12).

Regarding claim 5, Graham disclose a diagnostic support apparatus wherein:

the diagnostic support content creating means further comprises storage means for

storing first diagnostic support content (the first diagnostic support content could either be stored

on the local drive of the computer, if a single computer is used or on the server if a plurality of

computers are connected via a network; page 13, lines 16-17 and lines 23-24); and

creates second diagnostic support content by using the first diagnostic support

content and the diagnostic information (figs 5-6B; page 18, lines 9-23; fig 11; page 27, lines 22-

24-page 28, lines 1-4; if there is an already existing diagnostic content for a given patient then

the new diagnostic content builds on the already stored diagnostic content for that patient).

Regarding claim 6, Graham disclose a diagnostic support apparatus wherein:

the diagnostic support content storage means and the transmission means

constitute a diagnostic support server (fig 2; server 220, page 12, line 28); and

the information acquisition means, the reception means, the diagnostic support

information creating means, and the diagnostic support information display means constitute a

diagnostic support execution terminal (fig 2; local computers 250; page 12, line 29; page 13,

lines 3-5, evaluation software 340; page 13, lines 26-29).

Regarding claim 7, Graham disclose a diagnostic support apparatus further comprising:

a diagnostic support content creating terminal including diagnostic support content creating means for creating the diagnostic support content, and transmission means for transmitting, to the diagnostic support content server, diagnostic support content created by using the diagnostic support content creating means (local computer 250; page 17, lines 3-9; the physician uses his local workstation with preloaded evaluation software to create diagnostic support content which could then be transmitted to the server 220).

Regarding claim 8, Graham disclose a diagnostic support apparatus wherein the apparatus comprises:

a diagnostic support content creating means server including diagnostic support content creating means storage means for storing the diagnostic support content creating means, and transmission means for transmitting the diagnostic support content creating means to the diagnostic support content providing terminal (page 13, lines 25-29; the diagnostic support content creating means is stored on the server which is transmitted to the local terminals via a network); and

the diagnostic support content creating terminal comprises diagnostic support content reception means for receiving the transmitted diagnostic support content creating means (the local computers access the evaluation software and the database via a network; page 12, lines 26-33; page 13, lines 23-29); and

creates diagnostic support content by using the received diagnostic support

content creating means (page 13, lines 18-24; the diagnostic support content is created by

receiving the evaluation software form the server).

Regarding claim 9, Graham disclose a diagnostic support apparatus wherein the

apparatus comprises:

detection means for detecting that diagnostic support content stored in the

diagnostic support content storage means is at least updated or added (page 18, lines 5-6;

whenever new information is added to the diagnostic support content, it is automatically detected

and stored by the diagnostic support content storage); and

transmits the diagnostic support content on the basis of a detection result obtained

by the detection means (page 18, lines 9-19; physician can save and load workups to the database

230 at any time, once a new evaluation file is saved, it's detected by the administrative software

and sent to the database 230 for future use; page 17, lines 6-9).

Regarding claim 10, Graham disclose a diagnostic support apparatus wherein the

diagnostic support content creating terminal comprises:

information acquisition means for acquiring diagnostic information concerning at

least one of a patient, an examination, and an image from a medical system (fig 11A,

angiography routine; page 26, line 15-page 28, line 19); and

storage means for storing first diagnostic support content (server, or the memory

of local computer hard drive or floppy disk drive; page 12, lines 24-32-page 13, lines 1-17); and

creates second diagnostic support content by using the first diagnostic support content and the

diagnostic information (figs 5-6B; page 18, lines 9-23; fig 11; page 27, lines 22-24-page 28,

lines 1-4; if there is an already existing diagnostic content for a given patient than the new

diagnostic content builds on the already stored diagnostic content for that patient).

Regarding claim 13, Graham disclose a diagnostic support method of providing

diagnostic support comprising:

a step of acquiring diagnostic support content (page 13, lines 23-24; the physician

acquires previously stored diagnostic support contents form the database 230 which stores all the

information regarding patients and diagnosis; page 17, lines 6-9);

a step of inputting diagnostic information concerning at least one of a patient as a

diagnostic support target, an examination, and an image (page 13, lines 20-22);

a step of creating diagnostic support information using the diagnostic support

content and the diagnostic information (evaluation software, physician inputs patient information

along with all the symptoms, risk factors and test results and the evaluation software returns

diagnostic support information, abstract);

a step of displaying the diagnostic support information (page 13, lines 20-22).

Regarding claim 14, Graham disclose a diagnostic support method further comprising:

a step of creating the diagnostic support content (the system allows the physicians

to create a diagnostic support content, abstract); and

a step of transmitting the diagnostic support content to another computer (the

diagnostic support content could be transmitted to the server or the administrative computer;

page 13, line 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
    or nonobviousness.

Claims 11 and 12 are rejected under 35 U.S.C 103(a) as being unpatentable over

Graham et al. (WO 98/58338) in view of Ema et al. (US 5, 779, 634) herein after referred to

as Ema.

Regarding claims 11 and 12, Graham disclose the claimed invention except the

diagnostic support apparatus comprises characteristic value calculator for images.

However, Ema disclose a diagnostic support information creating means comprises characteristic value calculation means for calculating a characteristic value from a medical image contained in the diagnostic support information (column 17, lines 47-55) , and creates diagnostic support information based on the characteristic value calculated by the characteristic value calculation means (column 17, lines 44-46).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teaching of Graham with Ema since Ema suggest an improved method for evaluation of x-ray and other image based reports using a CAD system (Ema, column 1, lines 49-57).

Regarding claim 12, the diagnostic support system disclosed by Graham as modified by Ema comprises:

an information creating means further comprises identification/classification means (Graham, evaluation software comprises identification/classification means; page 21, lines 9-23); and

creates diagnostic support information based on an identification/classification result using the characteristic value calculated by the characteristic value calculation means (the evaluation software generates diagnostic support information based on the classification of the diagnosed disease, as modified above the system could further incorporate characteristic values to generate diagnostic support information).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing related limitations of the

applicant's claimed and disclosed invention.

Yamada, Shinichi et al. (EP 487110 A2), **Segal, Elliot A. et al.** (US 20010041991 A1), **Filler,**

Aaron G. (US 20010051881 A1), **Eglington, Thor** (US 20020091687 A1), **Schuetze; Hinrich**

et al. (US 6567797 B1).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Atia Syed (Tel No. 571-270-7134).The examiner can normally be

reached on Monday-Friday, 8:30AM to 3:30PM. If attempts to reach the examiner by telephone

are unsuccessful, the examiner's supervisor, Terrell Mckinnon can be reached on 571-272-4797.

The fax number for the organization where this application or proceeding is assigned is 571-273-

8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./   01/16/2009

Examiner, Art Unit 4185

/Terrell L Mckinnon/

Supervisory Patent Examiner, Art Unit 4185